

Transportation Initiatives

Voluntary Approaches to Reduce Greenhouse Gas Emissions

Sharon Saile, Transportation Policy & Evaluation Group
EPA's Office of Transportation and Air Quality
November 21, 2002



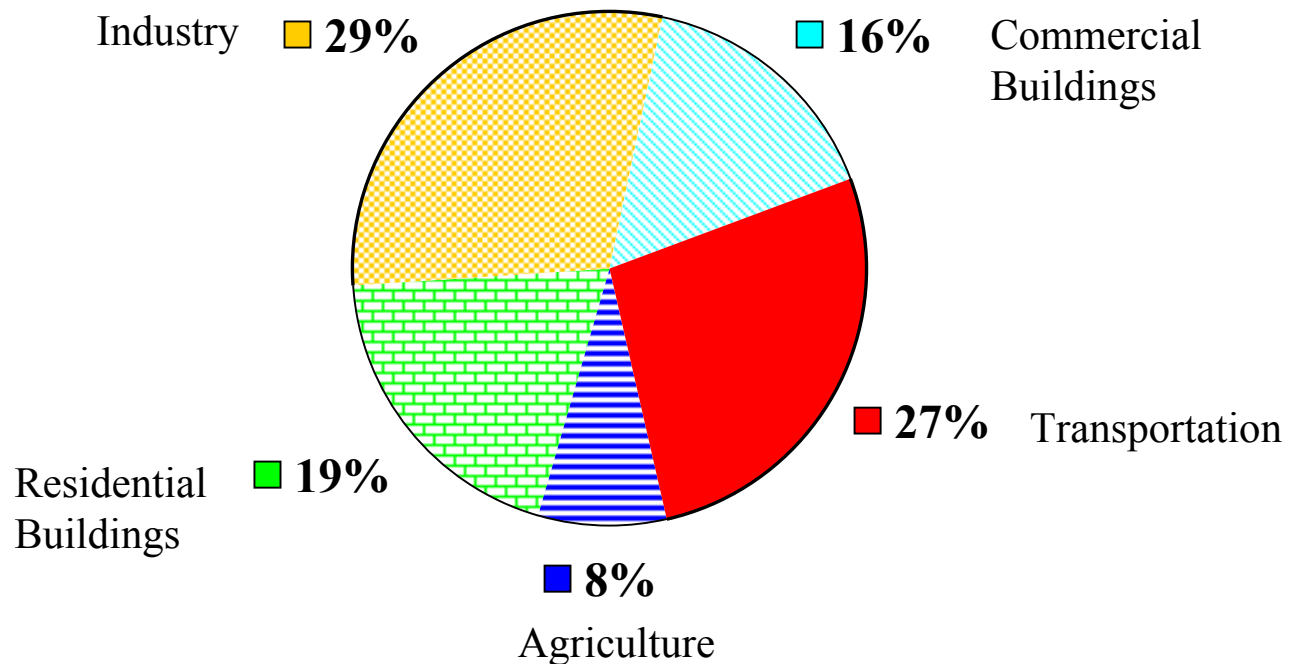


Voluntary Approaches to Reduce GHG Emissions

- Context: transportation emissions
- Foster advanced technology
- Cultivate innovative local approaches
 - ◆ Clean Air Transportation Communities
- Promote emission reductions
 - ◆ Commuter Choice Leadership Initiative
- Future Directions

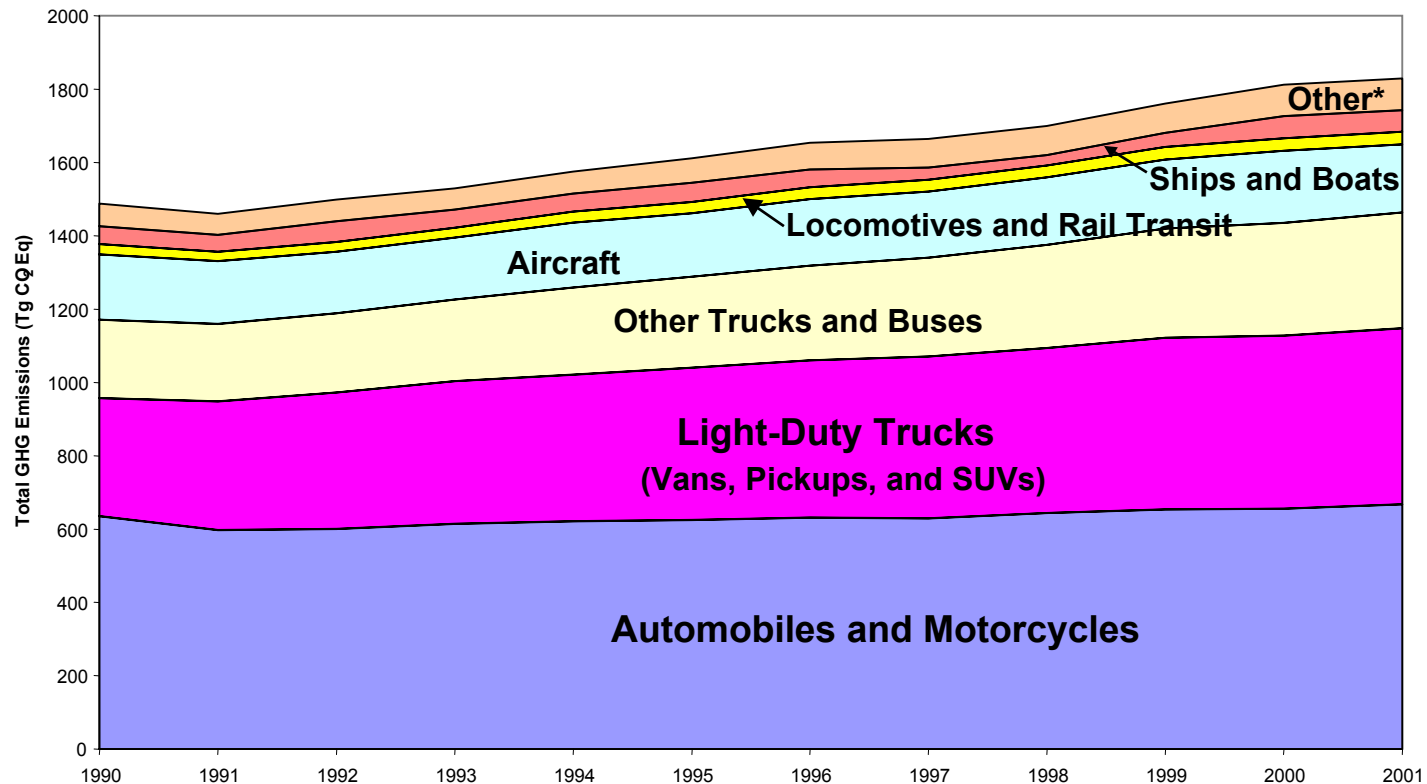
Transportation Sector is Second Largest Sector of U.S. Greenhouse Gas Emissions in 2000

Transportation is 27% of emissions broken down by economic sector



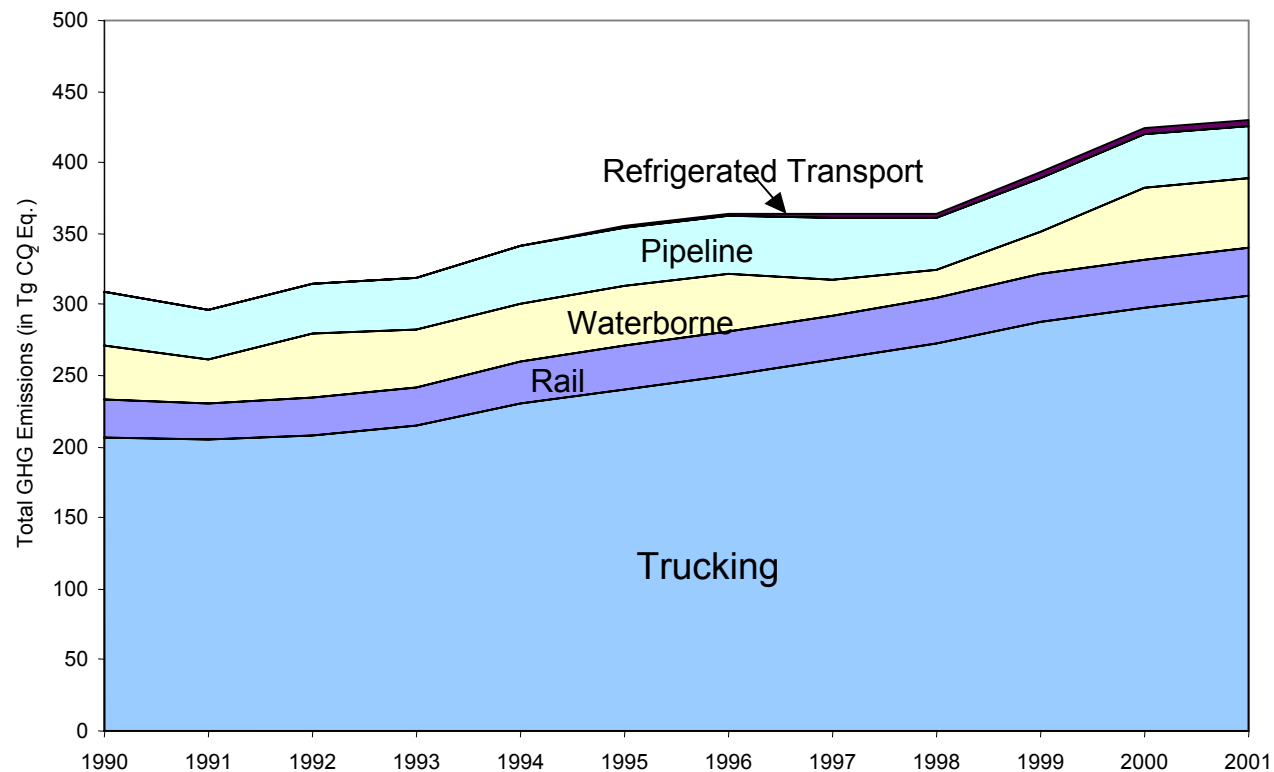
U.S. Transportation Emissions

(1865 mm tons CO₂-e in 2001)

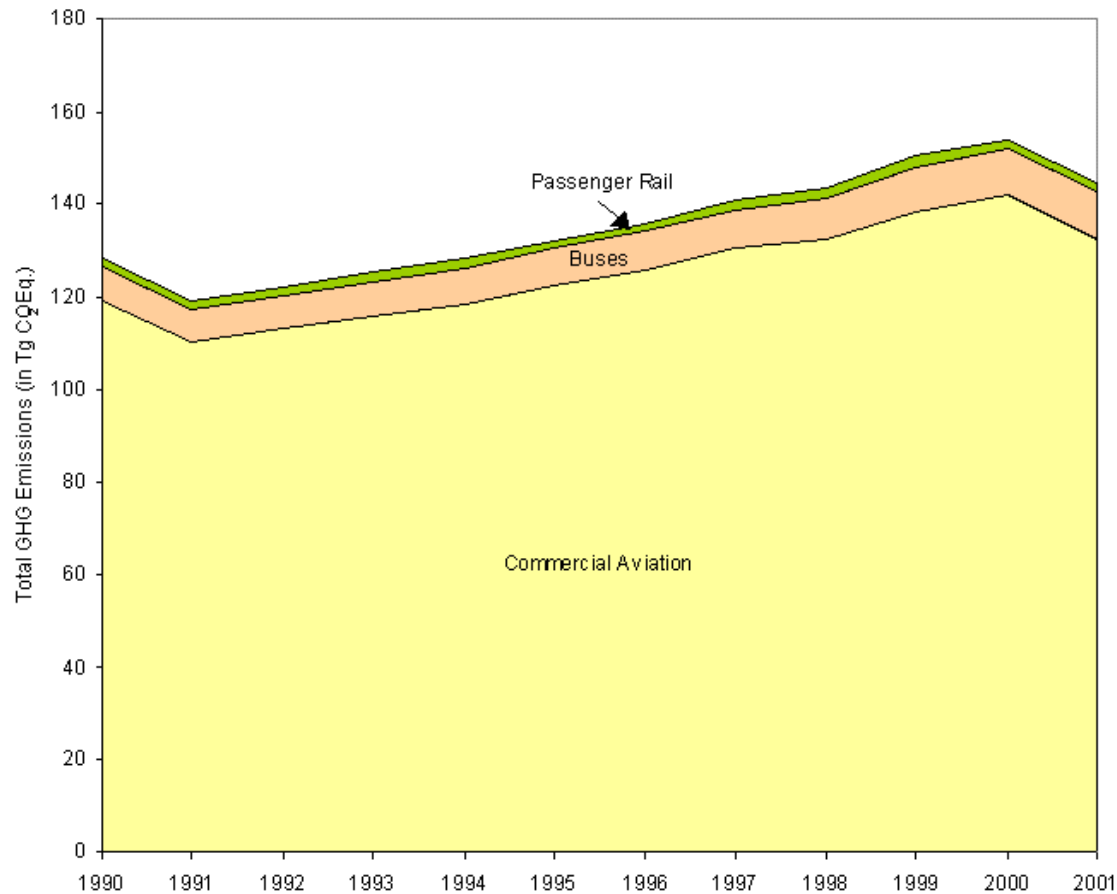


U.S. Freight Emissions

(426 mm tons of CO₂-e in 2001)

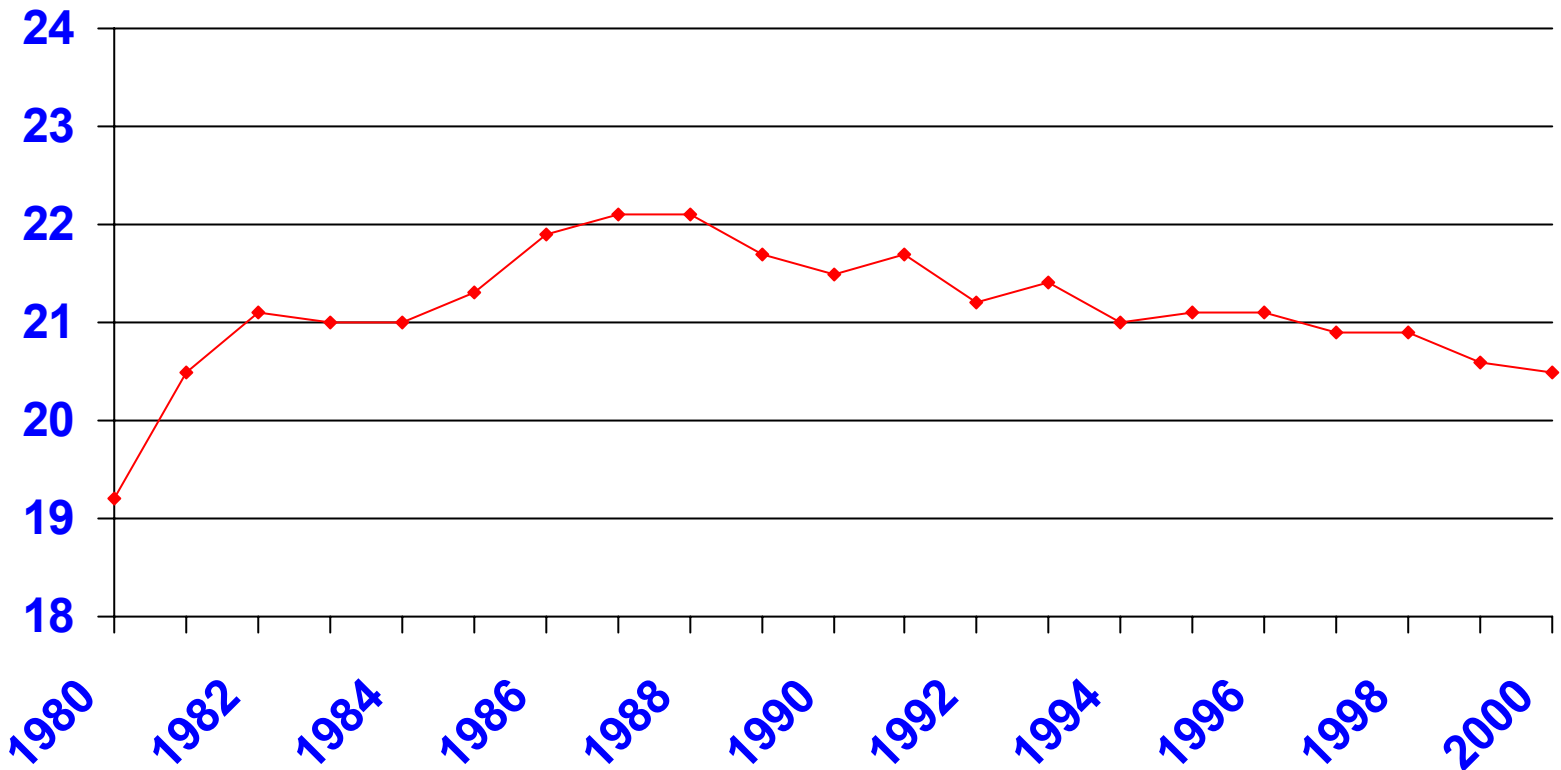


U.S. Public Transport Emissions (145 mm tons CO₂-e in 2001)

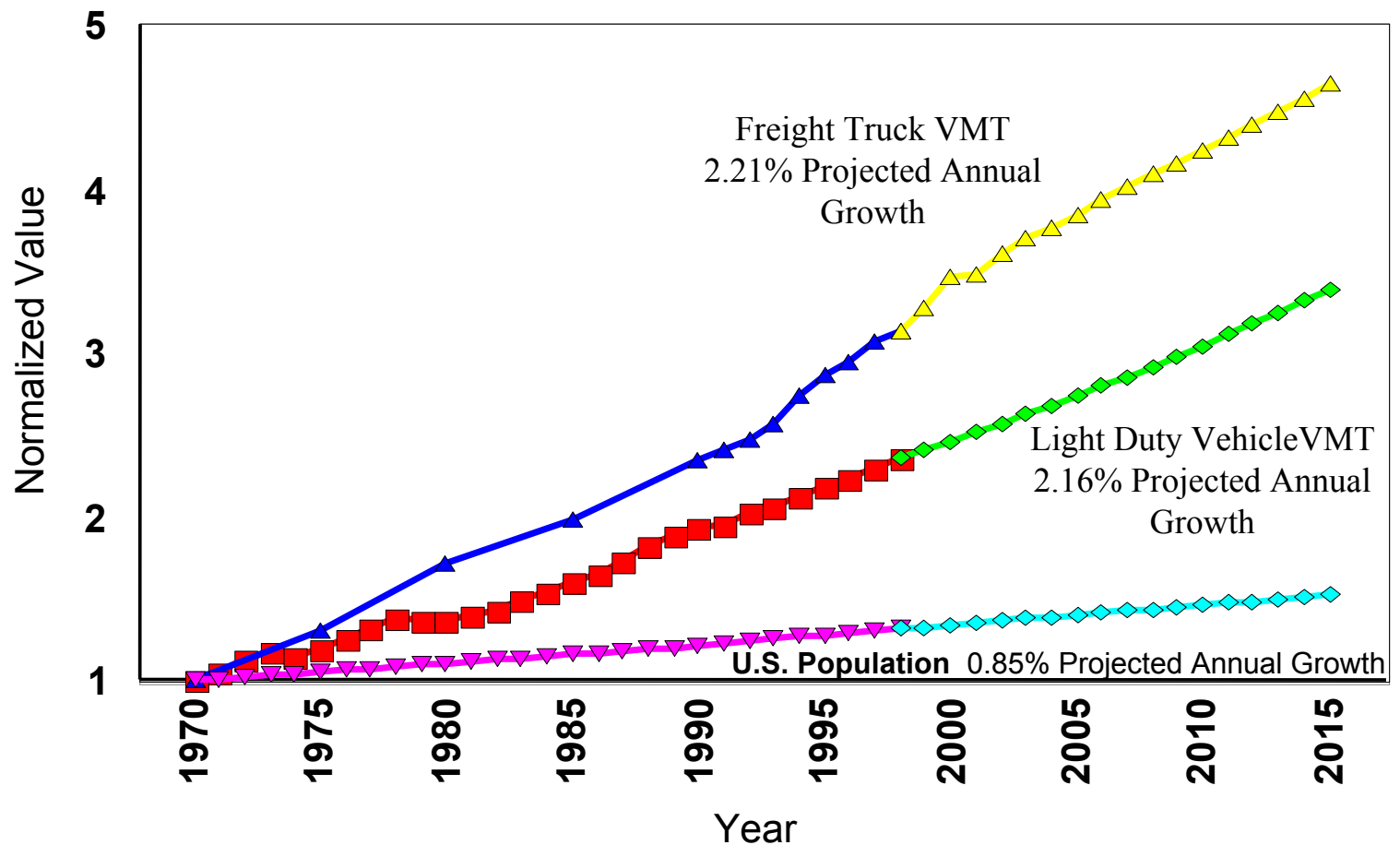


New Personal Vehicle Fuel Economy at 21-Year Low

“Real World” fuel economy, 15% lower than CAFE values



VMT Growth is Outpacing Population Growth





EPA's Approach

- Transportation programs provide multiple benefits, including reducing greenhouse gas emissions, criteria air pollutant emissions, and reducing fuel use
- Use of multiple strategies:
 - Foster Advanced Technology
 - Cultivate Public Education
 - Promote Voluntary Programs



Foster Advanced Technology

- Develop vehicle technologies that are
 - Clean, efficient, and cost-effective
 - Demonstrated hydraulic hybrid technology
 - Commercialization within the next 10 years
- Support hydrogen fuel cell development
 - Testing and certification of vehicles
 - Modeling of life cycle emissions



Cultivate local approaches

- Spur innovative approaches, at the community level, to:
 - Reduce criteria and GHG emissions from the transportation sector
 - Demonstrate cost-effective, measurable emission reductions
 - Identify and publicize successes to promote widespread replication
 - Strengthen federal/local partnerships



Clean Air Transportation Communities

- 10 cooperative agreements, across seven Regions
- Projects support:
 - Smart Growth/Land Use efforts that reduce transportation-related emissions
 - Commuter Choice
 - Green fleets/Cleaner vehicles
 - Outreach and education



Clean Air Transportation Community – pilot projects

■ **Human/ Electric Powered Vehicles**

(Philadelphia, PA)

- electric-assist utility quadricycles and education in targeted settings for moving people & material short distances, can replace LDVs & LDTs in some applications
- truly innovative; good potential for replication; evaluation emphasized

■ **On Thunderbird Trail: Using Tribal Traditions to Reduce Vehicle Emissions** (Manistee, MI)

- hybrid-electric multi-passenger vehicles, electric-assist bikes/trikes for work and errands; engages tribal elders in new centralized housing as respected leaders for community change
- innovative approach w/ tribal perspective supports smart growth & commuter choice



Clean Air Transportation Community – pilot projects

■ **Flexcar Hybrid Vehicle Program** (Seattle, WA)

- demonstrates low-emission, high mileage gas/electric hybrid vehicles in context of car sharing program
- recipients are proven performers, effective partnering (EPA funds to be matched by partners), good prospects for replication

■ **Truck Stop & Terminal Electrification** (NY)

- demo with analysis of truck stop electrification project in truck hub in the Bronx and on NY Thoroughway
- strong outreach/promotion aspects
- good partnering, high-visibility, good analysis plan



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Promote Voluntary Programs

- Commuter Choice Leadership Initiative is a joint EPA/DOT partnership with corporate leaders - sets a standard of excellence for commuter benefits
- Charter Cities Campaign – EPA direct recruiting focus is on Philadelphia, Denver/Boulder, and San Francisco
- State and Local governments can use CCLI program to reduce emissions



CCLI Addresses Traffic Problem

■ Problem for U.S. energy security

- 7B gallons wasted fuel/year & increasing

■ Problem for U.S. business & workers

- Causing delay of 36 hours/year/person
- "Rush hour" now 6 or 7 hours
- \$80B per year in lost productivity

■ Problem for U.S. environment

- Miles traveled up 75% from 1980 to 1999
- 80% were drive alone trips
- "Light duty" vehicles cause 16% of U.S. GHG emissions



- Substantial benefits can accrue to both employers and employees
 - A typical commuter switching from driving alone to using commuter benefits saves more than \$800 in transportation costs annually
 - Benefits to employers can outweigh the administrative costs of becoming a CCLI employer
- Already over 1,300 employers have signed up
 - free transit passes
 - telecommuting
 - bicycle facilities

CCLI Program Overview

- Sector: transportation (where much of U.S. greenhouse gas growth has been)
- Behavior change: commute trip reduction
- Public co-benefits: traffic reduction
- Employer co-benefits: improved employee recruiting, employee retention, employee job satisfaction, employee productivity, reduced parking facility costs, tax savings
- Worker co-benefits: reduced transportation costs, tax savings, reduced worker stress reduction, improved job satisfaction



Employer role

- Designate point of contact
- Centralize information
- Inform employees of benefits
- One major commuter subsidy
 - Transit subsidies
 - Vanpool benefits
 - Parking cash-out
 - Telecommuting
- Three supporting benefits from long list
- Offer emergency ride home
- Report success



Government role

- Public recognition
- Use of “Commuter ChoiceSM Employer” name
- Account management
- Technical support
- Web site, hotline, & e-mail
- Web calculator tool
- Track progress



CCLI Creates Mode Shift

- 36 case studies across U.S. found ...
- For every 1000 American commuters offered these benefits ...
- Between 100 and 300 will shift out of the drive-alone commute to ...
- Bus, train, carpool, vanpool, bike, walk, telecommute, etc.
- Air pollution & global warming emissions reduced



www.commuterchoice.gov

- If half of all employees in the US were offered these benefits, EPA estimates reducing emissions by 46 million metric tons of CO₂ equivalent
- State and Local governments can partner with:
 - Transit Agencies
 - Metropolitan Planning Organizations
 - Rideshare Organizations
 - Transportation Management Associations
- Employers can sign up on the web



Future Directions

- We must improve transportation efficiency to reduce carbon emissions or dependence on imported oil
- Success will reduce carbon, and have multiple benefits
- EPA is developing voluntary program portfolio
- State and local governments can make real reductions happen